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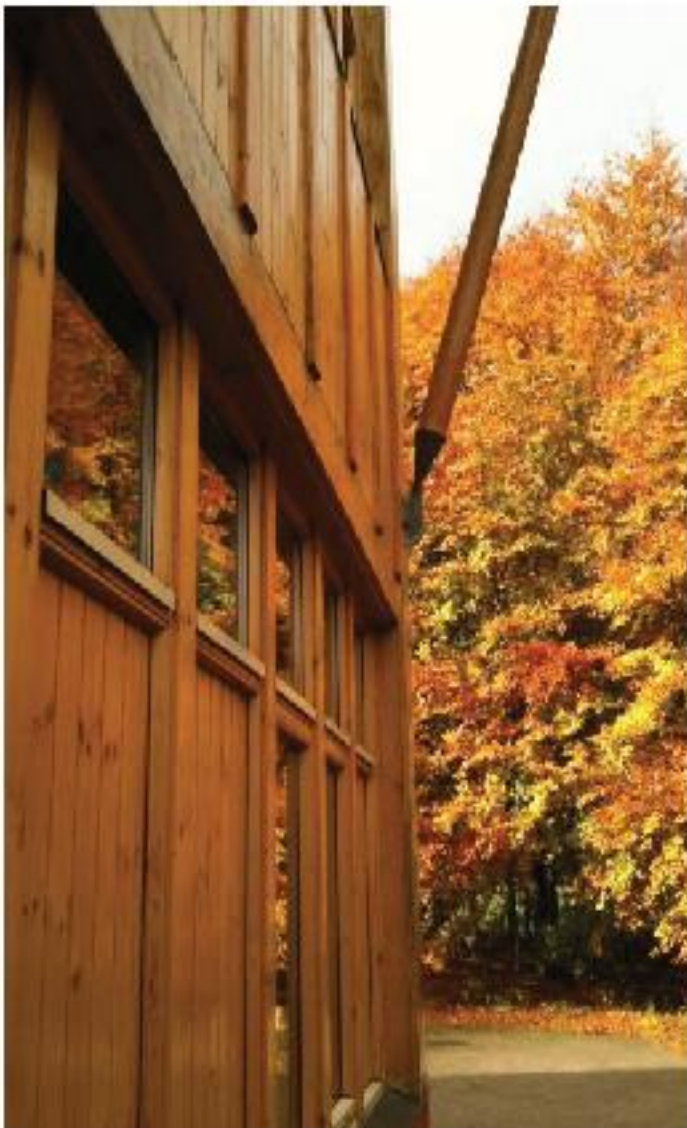
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**Maintaining the Energy  
Security of Turkey in the Era  
of Geopolitical Turmoil**

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# Maintaining the Energy Security of Turkey in the Era of Geopolitical Turmoil

*Ibrahim Said ARINC*

## ABSTRACT

The energy security of Turkey is very much interconnected with geopolitical developments due to its dependence on imported energy resources, especially on natural gas. Turkey, moreover, is a natural energy hub for Europe but its ability to provide the energy bridge between the Middle East and Caucasus hydrocarbons suppliers and European markets is being adversely affected by geopolitical tensions in the neighbouring region. The Russian intervention in Ukraine and the security and humanitarian crisis in Syria are just two high-profile instances of wider geopolitical developments which affect Turkey's ability to meet its own rising growing needs as well as its ambition to act as Europe's energy bridge. This paper argues that in order to meet its foreign policy goals in regard to energy not only does Turkey need to ensure the return of peace to neighbouring regions, but also should adjust its own domestic policies as the first step for being able to respond constructively to external developments.

## INTRODUCTION

Energy security has become a very popular discussion topic within the discipline of international relations. The recent geopolitical developments in the world have made energy policies a main component of foreign policy decision making process. The annexation of Crimea by the Russian Federation and the Syria crisis could be regarded as the most challenging foreign policy issues of this decade. In this tense environment of Eurasia, Turkey's energy security is not directly affected but energy security concerns have been raised regarding future risks of energy supply disruptions. Although energy security issues are mostly discussed in relation to price risks, the possibility of the use of energy resources as a foreign policy tool endangers the energy systems. In the literature, the doyen of the energy industry Daniel Yergin identifies energy security as "the availability of sufficient supplies at affordable prices".<sup>1</sup> He also comments that every country interprets the definition of energy security with its own dynamics.<sup>2</sup>

Geographically Turkey is located at the heart of Eurasia, neighbouring the Middle East and the European Union. Moreover, the Mediterranean Sea and the Black Sea give Turkey access to a wider geography. Turkey is a candidate for admission to the European Union and has



carried out important reforms in order to comply with EU Acquis. Turkey is considered to be a developing country and has had significant impetus in the last decade in terms of economic and social development. The Turkish economy annually grew significantly and became a centre of attraction for foreign direct investment. In 2014 Turkey ranked as the 16<sup>th</sup> largest economy in the world and the 6<sup>th</sup> biggest economy of Europe. Despite the global economic crisis of 2008, the Turkish economy had an annual growth rate of 5% between the years of 2004-2014. Parallel to the annual growth rate, primary energy demand had a 5% annual increase in the last decade. We can easily argue from analogy that the growing Turkish economy needs energy to maintain its growth rate.

However, Turkey is not as lucky as its Middle Eastern neighbours in that the Turkish energy system is very much dependent on energy imports. The growing energy demand has been met by imported resources and the import proportion of primary energy production exceeded the level of 70% in the last decade.<sup>3</sup> This dependence on energy imports and the fast growth rate of the economy have created risks for maintaining energy security.

Among other energy resources the energy system of Turkey is very much dependent on natural gas. Therefore the risks of natural gas supply disruptions and source diversification issues directly affect the energy security policy of Turkey. In this paper, the author will analyse the energy profile of Turkey and the measures to be taken in order to mitigate the risks to energy security in relation to the natural gas supply, considering the energy policies and foreign policy challenges that Turkey faces.

## **ENERGY PROFILE OF TURKEY**

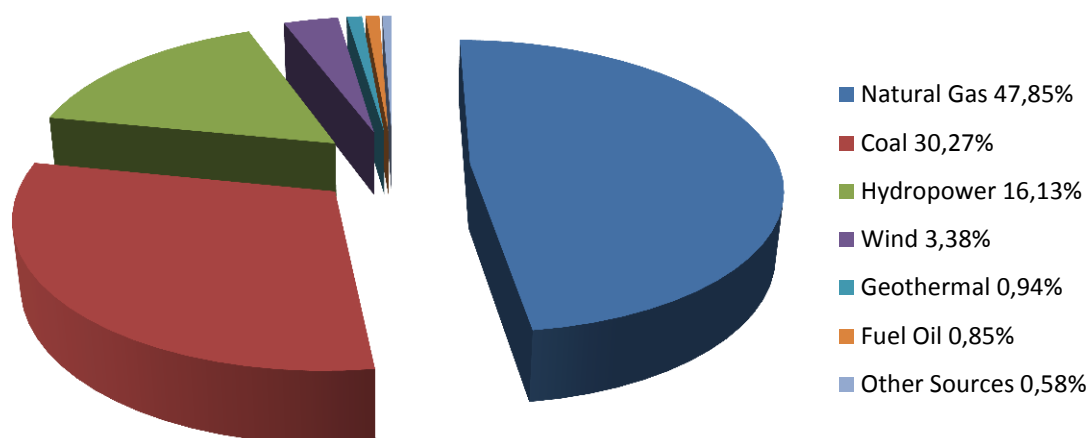
According to the BP Statistical Review of World Energy, Turkey's primary energy demand amounted to 125.4 Million Tons of Oil Equivalents (Mtoe) in 2014.<sup>4</sup> Turkey was ranked as the 19<sup>th</sup> biggest energy market in the world in terms of primary energy consumption. According to the Ministry of Energy and Natural Resources of Turkey (MENR), primary energy consumption will reach the level of 218 Mtoe by 2023.<sup>5</sup>

### **Chart 1:**





## Source Based Electricity Generation of Turkey in 2014



Source: MENR

On the other hand, in Turkey the electricity generation reached the level of 251 GWh in 2014. Within this electricity generation the sources are distributed as follows: Thermal 79.5% GWh, hydropower 16.1% and other renewables 4.3%.<sup>6</sup> If we analyse the source based electricity generation, natural gas accounted for 47.85%, coal 30.27%, hydropower 16.13%, wind 3.38%, geothermal 0.94%, fuel oil 0.85%, and other sources accounted for 0.58 % of the total production (see Chart 1).

In order to maintain the competence and functionality of the energy market, the Turkish government has carried out several reforms and promoted private sector investments in order to meet the growing energy demand. In 2014 private electricity generation companies produced 72% of the total supply.<sup>7</sup> At the end of 2014, the total installed electricity capacity of Turkey reached the level of 69.520 MW, from the level of 36.824 MW in 2004.<sup>8</sup> It is obvious that the installed power capacity of Turkey has approximately doubled in ten years. The hydropower, natural gas and coal based power plants still hold the majority of the total capacity (see Table 1). In the last decade, the share of geothermal, wind and solar increased significantly. The share of fuel oil and oil based thermal plants decreased as the Turkish government had targets for promoting environment friendly electricity generation.

**Table 1: Source Based Installed Capacity of Turkey**

Year	Thermal			Hydrolic	Geothermal, Wind and Solar
	Coal	Natural Gas	Other		
2004	22,5%	30,8%	12,2%	34,3%	0,1%
2005	23,5%	31,6%	11,6%	33,2%	0,1%
2006	25,2%	31,2%	11,2%	32,3%	0,2%



2007	24,7%	31,5%	10,6%	3,3%	0,4%
2008	24,1%	32,1%	9,7%	33,1%	0,9%
2009	23,5%	32,5%	9,6%	32,5%	1,9%
2010	24,0%	32,5%	8,6%	32,0%	2,9%
2011	23,6%	30,2%	10,3%	32,4%	3,5%
2012	22,0%	30,1%	9,4%	32,4%	4,2%
2013	19,6%	31,6%	9,2%	34,8%	4,8%
2014	21,1%	30,9%	8,2%	34,0%	5,9%

Source: MENR

## NATURAL GAS MARKET OF TURKEY

Among other resources natural gas plays the most crucial role in the energy sector of Turkey. Turkey had a natural gas consumption of 48 Billion Cubic Metres (BCM) in 2014.<sup>9</sup> Turkey is a very important natural gas market in global terms and Turkey is the 6<sup>th</sup> largest gas market of Europe.<sup>10</sup> However, Turkish indigenous natural gas production only meets 2% of the total natural gas consumption.<sup>11</sup> BOTAŞ is the major player in the natural gas market and operates the country's natural gas grid and imports approximately 80% of its total natural gas consumption. The Turkish natural gas market is very much dependent on Russia, with in excess of 58% of gas consumed by BOTAŞ and other private companies coming from Gazprom (see Table 2).

**Table 2: Long Term Natural Gas Agreements of Turkey (under operation)**

Source	Annual Quantity (BCM)	Percentage
Algeria (LNG)	4,4	8%
Nigeria (LNG)	1,2	2%
Iran	10	19%
Russian Federation	30	58%
Azerbaijan	6,6	13%
TOTAL	51,8	100%

Source: MENR

## Map 1: Natural Gas Grid, Oil and Natural Gas Pipelines of Turkey





Source: BOTAŞ

The other major risk for the Turkish natural gas sector is the low capacity of natural gas storage facilities. In Turkey there is only one existing natural gas storage facility, operated by TPAO with an annual capacity of 2,6 BCM. There is an ongoing project of BOTAŞ in the Salt Lake district of Turkey with an annual capacity of 1 BCM that will be operational in 2018.<sup>1 2</sup> If we compare the storage facilities of Turkey with those of other countries it is clear that Turkey has operational risks for natural gas usage (see Table 3). The main risk could be considered to be for the natural gas based power plants and households. As mentioned above the share of natural gas in electricity generation is approximately 50% and any gas supply disruption could cause a domino effect in the Turkish energy system.

Countries	Rate of Storage Capacity / Total Consumption	Rate of Storage Capacity / Consumption of Households
USA	18	48
Russian Federation	27	61
Ukraine	49	109
Germany	19	105
France	20	52
Italy	30	65
Turkey	5	20

Source: World Bank

## TURKEY AS A STRONG PARTNER OF EU NATURAL GAS DIVERSIFICATION PROJECTS





Turkey as a candidate for EU membership is an active partner in the diversification of supply projects of the EU. The Southern Corridor, for example, will enable the EU to create the fourth natural gas corridor in order to diversify natural gas routes and resources as an alternative to North European, North African and Russian routes. In the first place the Nabucco Natural Gas Pipeline project was developed for the realisation of the Southern Corridor. Although the Nabucco project failed due to the decision on its expensive tariff system by the Shah Deniz Natural Gas Field investors of Azerbaijan (the field operator is BP and the Azeri Government was active in this decision), the TANAP (Trans Anatolian Pipeline) project which has the same philosophy is now under construction.

The TANAP project is envisaged to be commissioned in 2018 for the Turkish branch and in 2019 for the European branch. TANAP will be extended to the European Union via the Trans-Adriatic Pipeline (TAP). The project is designed to have a maximum annual capacity of 31 BCM; in the first phase it will deliver 6 BCM to Turkey and 10 BCM to the European Union.<sup>1 3</sup> In Turkish territory the project starts from the Turkish-Georgian border interconnecting with the South Caucasus pipeline and will end at the Turkish-Greek Border to interconnect with the TAP Pipeline. The project will also have two exit points to interconnect with the Turkish gas grid.<sup>1 4</sup>

## **TURKISH ENERGY POLICY AND ENERGY SECURITY**

Turkish energy policy is based on the principles of maintaining energy supply security, promotion of alternative energy resources, exploitation of indigenous energy resources, sustainability, and liberalisation of energy markets and promotion of energy efficiency.<sup>1 5</sup> These policy fundamentals are envisaged to be realised in accordance with global energy dynamics and the geopolitical realities of Turkey.

Energy supply security is planned to be maintained with the promotion of indigenous resource based energy generation facilities and diversification of energy supply sources. The other significant strategy is supporting the increase of renewables in total primary energy consumption. The diversification of natural gas sources and realisation of investments to increase the resilience of the natural gas system is also suitable to maintain the energy security.

In order to meet the growing energy demand, the Turkish government also aims at the creation of a better investment environment for foreign direct investment (FDI) and the private sector in the energy system. Moreover, a functional and liquid energy market is another target for the Turkish government in order to maintain the long term energy



investments. The government set targets mainly to be realised by 2023, the centenary of the establishment of the Republic of Turkey. These main targets are:

- The installed electricity capacity of Turkey will exceed the level of 110.000 MW by 2023,
- Two nuclear power plants will be operational and the third one will be under construction by 2023,
- Utilisation of the proven reserves of coal and lignite by 2023,
- Expanding the annual natural gas storage capacity up to 5,6 BCM by 2020,
- Increasing the share of renewables to 30% of the total electricity generation by 2023,
- Utilisation of all hydropower and geothermal potential by 2023,
- Increasing the wind power installed capacity to 20.000 MW by 2023,
- Increasing the energy efficiency per capita up to 20% by 2023,
- Decreasing the single resource dependence on any country at a minimum to below 50% of total natural gas imports by 2020,
- Decreasing the share of natural gas to below 38% of total electricity generation.<sup>1 6</sup>

## **CHALLENGES FOR MAINTAINING THE NATURAL GAS SUPPLY SECURITY OF TURKEY**

Despite the fact that government sets targets to diversify energy sources, it is obvious that natural gas is expected to maintain its dominant role in the Turkish energy system in the following decades. Therefore, the risks for natural gas supply disruptions or political turmoil have to be minimised with strong concrete measures. As Turkey has had very strong energy demand in the past decade and did not have so many options to meet the rising natural gas demand, the Russian Federation has kept its dominant position in the Turkish gas market. On the other hand Turkey has encountered political risks with developments in the Middle East that have the potential to endanger secure future natural gas supplies from both existing routes and prospective alternatives from the region. But before commenting on the political environment, it will be more convenient to focus on the structural problems of the Turkish natural gas market.

In Turkey, the liberalisation of the electricity market has made significant progress in the last decade. Private companies are active in electricity generation and trade. PMUM is established for daily basis electricity trade between sellers and buyers. Although the price cap of electricity is still determined by the government, Turkey has a young liberal electricity market at a certain level. However, the situation is not the same in the natural gas market. The targets set by Natural Gas Market Law 4646 could not be applied and there is a need for a new and contemporary natural gas market law immediately.

The roles of BOTAŞ and the private companies have to be clarified by the government in order to create a liquid natural gas market. Besides, the same as in the electricity market, government still determines the natural gas sales prices, which creates risk for private natural



gas importers and creates a burden for BOTAS. In some periods of time BOTAS subsidises the natural gas prices and this creates a loss to the Turkish Treasury. At the same time private natural gas importers are very cautious about taking on the future risks of gas price changes and reluctant to sign new gas contracts, although the Turkish gas market is growing and there is room for new gas contracts in future. The other important point is the need to create storage facilities but there are many uncertainties deterring the private sector from making investments. The existing regulations do not create a feasible environment to attract storage facility investments. Therefore, in winter time the Turkish gas market faces demand higher than the supply capability of the natural gas market and storage facilities and this creates temporary disruption to natural gas power generation facilities and industrial areas. It is obvious that upgrading of the existing system and storage facilities has the potential to make the necessary investments feasible, however the existing legal environment of the natural gas market is not sufficiently efficient to attract investors.

The other structural challenge is the future interconnections with neighbours of Turkey. The Turkish natural gas grid is only interconnected to Greece. There is an ongoing investment by BOTAS to establish interconnection with Iraq. However, Turkey-Bulgaria and Turkey-Georgia interconnections could increase the liquidity of the natural gas market in Turkey.

## **GEOPOLITICAL CHALLENGES AND IMPLICATIONS FOR ENERGY SECURITY**

Turkey neighbours a very problematic geographical region. The civil wars that broke out after the ‘Arab Spring’ and the political turmoil in Ukraine endanger the security of energy for Turkey. These geopolitical developments and Turkey’s ties with the actors in these political crises have significant potential to limit the options for taking measures to mitigate the future risks of an energy security crisis.

### *1- The Russian annexation of Crimea and war in Ukraine*

The ongoing civil war in Ukraine could be considered to be the biggest threat to Europe since World War II. The political turmoil of 2013 and the aggressive actions of Ukrainian President Yanukovich towards protestors resulted in political division of Ukraine between reformists and Russian supporters. In March 2014 Russia annexed the autonomous region of Crimea as a consequence of the so-called vote for independence in the Ukraine referendum.<sup>17</sup> Moreover, eastern provinces of Ukraine proclaimed support for the Russian invasion and civil war broke out between Ukrainian authorities and pro-Russian provinces.

The Ukrainian civil war has a direct effect on the natural gas relations of Eurasia. The share of Russian gas in the EU market is approximately 25% of the total consumption.<sup>18</sup> Historically Ukraine has been the main export route for Russia and Ukraine was harbouring 80% of Russian gas transited to European markets. We have already seen that the natural gas crises of 2005, 2007 and 2009 endangered the security of gas transit via Ukraine.



Although the European Union has backed Ukraine in almost every dispute with Russia, in order to isolate the gas disruptions caused by the potential threat to the Ukrainian route, the Nord Stream pipeline project was developed and commissioned in late 2011, directly connecting the Russian gas system via the Baltic Sea to Germany.<sup>1 9</sup> The other by-pass project is named South Stream, connecting Russian gas fields directly to Bulgaria, targeting the south-eastern gas markets of Europe that have been suspended as a result of ongoing political tension in Ukraine and legislative obstacles issued by the European Union.<sup>2 0</sup> Both projects aimed to by-pass Ukraine and decrease the dependence on Ukrainian territory for transit.

On the other hand, Ukraine has taken measures to decrease its dependence on Russian gas and since 2005 has decreased the share of Russian gas in total consumption from 77% to 36% in 2004. The main contribution to this change has been the reverse flow of gas from the European Union via the existing interconnections with Poland, Slovakia and Hungary.<sup>2 1</sup>

Turkey is very much dependent on Russian gas, BOTAŞ is the biggest gas customer of Gazprom and Turkey is the second biggest natural gas market for Russia. Turkey consumes natural gas from Russia via two separate routes. The first route is called the Balkan line, with annual capacity of 14 BCM, and the second route is called Blue Stream Pipeline with annual capacity of 16 BCM. In total Turkey annually consumes 30 BCM of Russian gas. Turkey is the last consumer of Russian gas from the Balkan gas pipeline that is transited via Ukraine. Therefore any crisis and disruption in Ukraine has the potential to directly affect Turkish consumption of Russian gas. It is announced that the transit agreement between Russia and Ukraine will expire in 2019 and this endangers the gas flows via the Balkan line.<sup>2 2</sup> During the visit of President Putin to Turkey in December 2014, the Turkish Stream Project, which is the new version of South Stream, was announced.<sup>2 3</sup> The project is designed to connect the Russian system via the Black Sea to the Turkish gas grid. It was envisaged that Turkey would replace the gas imports via the Balkan line with the Turkish Stream project, thus eliminating the disruption risk caused by any crisis in Ukraine. Moreover, with the realisation of the Turkish Stream Project, Russia would have an opportunity to access south Eastern Europe via the Turkish-Greek border. However, on November 24, 2015 Turkey shot down a Russian aircraft as a result of violation of Turkish airspace near the Syrian border and immediately Russia declared the suspension of the Turkish Stream project.<sup>2 4</sup>

Although Turkey and Russia have fostered their bilateral political and economic relations over the last decade, the Syria issue caused the biggest crisis in Turkey-Russia relations since the First World War. Turkey shot down a Russian military aircraft on November 24, 2014 as a result of violation of Turkish airspace. Russian President Putin considered this event a very hostile act and issued decrees to apply widespread economic embargoes and military measures in order to put pressure on Turkey. Although Gazprom and Russian energy officials made statements that there would not be any natural gas disruptions on contracted volumes of gas flows to Turkey, the Russian President declared that the Turkish Stream project was suspended as a result of ruined bilateral relations. The threat of Russian gas disruptions could



be considered one of the most significant risks for the energy system of Turkey which is heavily dependent on natural gas imports. Moreover, if Russia and Ukraine do not extend the transit agreement after 2019, Turkey and other Balkan countries will face disruption of gas flows.

## *2- War in Syria and uncertainty in Iraq*

Turkey neighbours Syria which is the most complicated regional crisis in contemporary politics. The ongoing war in Syria creates a threat to the energy security of Turkey and endangers the bilateral relations with Russia and Iran. The Assad regime, backed mainly by Russia and Iran, is fighting with the Syrian opposition supported by the Sunni Arab states, the US and Turkey. Political efforts to find a lasting settlement have failed several times due to Russia and Iran backing the Assad regime. On the other hand, the opposition is divided into several sections and the radical Sunni movement ISIS appeared as another threat not only to Syria but also to Iraq. The existing Syria issue has the potential to create a 'spill over' effect that would cause a Sunni-Shia war in the Middle East. The implications of the Syrian war for the energy security of Turkey could be considered to be that a potential crisis with Iran might endanger the existing natural gas supplies from Iran to the Turkish market.

Iran was under UN embargo until January 2016 and it has limited capacity of efficient natural gas infrastructure. Turkey and Iran bilateral relations are also fragile. The two countries have strong historical ties and deep historical clashes at the same time. Moreover, the contemporary problems of the Middle East increase the tension between Iran and Turkey from time to time. Turkey and Iran are on opposite sides in the Syria crisis, yet Turkey is the biggest consumer of Iranian gas and as mentioned above consumes 10 BCM annually. Iran is Turkey's second largest natural gas supplier, so that any political crisis with Iran could endanger the security of natural gas supplies to the Turkish market.

Iraq is another area of uncertainty as the integrity of the country is in danger. The ongoing disagreement between the Federal government in Baghdad and the Kurdish Regional Government (KRG) over the share of hydrocarbon revenues and the Federal budget prompted independent oil exportation by the KRG. Turkey has traditional ties with the people of the Kurdish region and pursues a very sensitive foreign policy to maintain the integrity of Iraq together with supporting the stability of the KRG. Turkish oil and gas companies are active in the natural gas and oil business in the KRG region and future natural gas exports are on the agenda as a part of the diversification of natural gas supplies in future. According to KRG officials, the KRG will be able to export natural gas to Turkey in 2018 with a maximum annual capacity of 10 BCM.<sup>2 5</sup> However, the political instability and the activities of ISIS in Iraq have the potential to endanger the stability of Iraq and the KRG which may influence the future gas export options to Turkey.

If the increasing tension between Arabs and Kurds, Sunnis and Shias is escalated the future natural gas supplies from Iran and Iraq (KRG) may be affected in a negative way. Therefore, a lasting peace in Syria and establishment of a functioning federal state system in Iraq are necessary to mitigate the risks of further turmoil in the region. Although Iran is a historical





friend and neighbour of Turkey, if their political interests are contradictory the natural gas supplies from Iran to Turkey are at risk of being interrupted.

### *3- Isolation of Turkey from eastern Mediterranean*

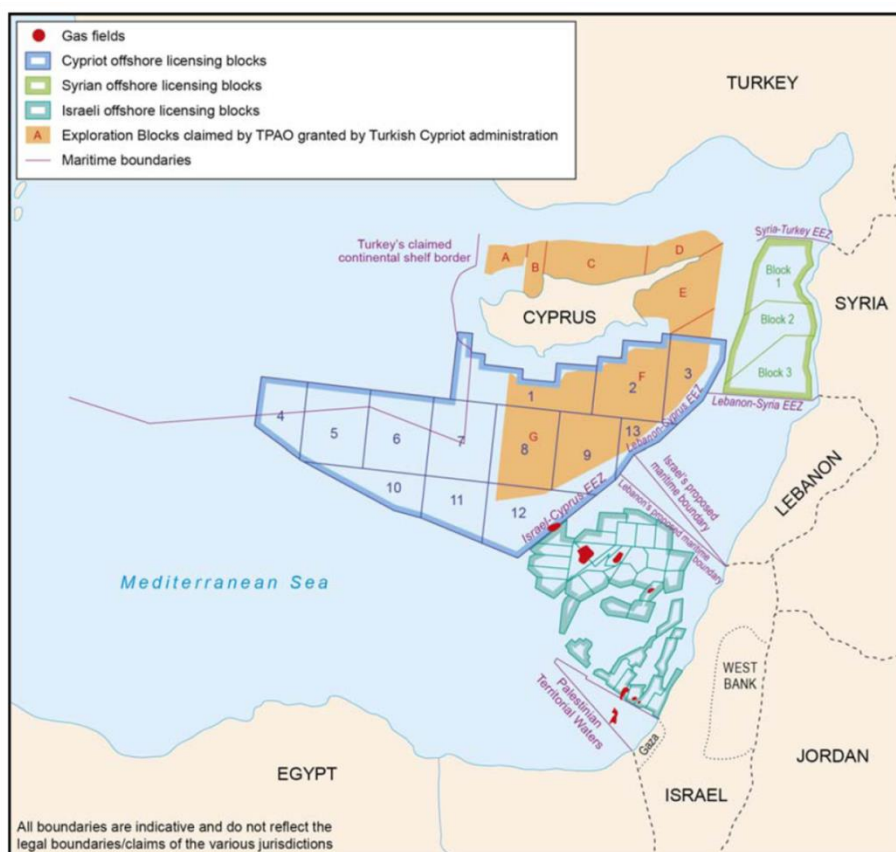
The eastern Mediterranean region could be regarded as the most problematic region for Turkey over the last five years due to the long standing tensions in Cyprus, Israel's aggressive acts towards Gaza and the coup d'état in Egypt. On the other hand, the natural gas discoveries in the Exclusive Economic Zone (EEZ) of Israel in the Tamar and Leviathan fields, the Aphrodite field in the EEZ of Cyprus (Greek Cypriot Administration) and the Zohr field in the EEZ of Egypt gave a new cooperation or conflict dimension to the eastern Mediterranean region.<sup>26</sup> After the last discovery of the Zohr field in Egypt, the proven gas reserves of the eastern Mediterranean have reached the level of 2.8 Trillion Cubic Meters (TCM).<sup>27</sup> If the necessary investments are realised, the region is expected to have 15-20 BCM annual gas export capacity.<sup>28</sup> Turkey is seen as one of the target markets or transit routes for the exploitation of the gas reserves discovered. Moreover, Turkey could be considered to be the best option for the commercialisation of the fields as the Turkish market is the largest one in the region and has rising demand.<sup>29</sup> However, the isolation of Turkey from the geopolitical dynamics endangers the projects with a Turkish option.

The Cyprus issue could be considered to be the most complicated foreign policy problem of Turkey and one that endangers its access to eastern Mediterranean gas reserves. Nevertheless, Turkey has made significant efforts to reach a settlement on the island, but the two parties could not find any common ground to decrease the tension and establish a lasting settlement. In 1960, the state of Cyprus was established by Turkish and Greek Cypriots in accordance with an international agreement guaranteed by the Turkish, Greek and British governments. However, in 1963, the Greek Cypriots attempted to isolate Turkish Cypriots from government institutions that were in breach of the agreement and the Constitution.<sup>30</sup> In 1974 Greece attempted to annex the island, which was resisted by Turkey in accordance with the 1960 Treaty of Guarantee. Unfortunately, since the 1970s the issue has not been settled despite the enormous support of the UN, the USA, the EU, Turkey and Greece. The admission of the Greek Cypriot Administration (GCA) to the EU as the State of Cyprus in 2004 has destroyed the hopes for a lasting settlement.

Turkish-Israeli bilateral relations were also ruined after the raid by the Israeli Defence Force on the Mavi Marmara flotilla in 2010. This resulted in the breaking off of the diplomatic relations between Turkey and Israel, which could be considered as the biggest crisis in bilateral relations since the establishment of the State of Israel. On the other hand Israel's natural gas discoveries provide a great area for cooperation between the two countries, as Turkey could be the most feasible natural gas market for Israeli gas companies and east Mediterranean gas could be a means for Turkey to diversify its gas sources and create competition with the existing long term gas contracts.

## **Map 2: EastMed Map of Claims, Conflicts and Disputed Parcels**





Source: Oxford Institute for Energy Studies (OIES)

Egypt has been considered a natural ally of Turkey since the latter's establishment, however, the coup d'état and imprisonment of President Morsi in 2013 created huge turbulence between Turkey and Egypt. Both countries recalled their ambassadors and they now have limited diplomatic communication. The frozen relations of Turkey and Egypt have complicated any natural gas project considering the possibility of Egyptian natural gas reserves being exported to Turkey.

Another problematic issue is the increasing military presence of Russia offshore in the eastern Mediterranean and the activities of the Russian military base in Tartus, Syria. The ongoing Syrian crisis may impede the natural gas projects until a lasting settlement in Syria is found. It would be very usual for Russia as a major gas supplier to Turkey and Europe to have a negative attitude towards eastern Mediterranean gas reserves that could compete with Russian gas in the market.

## CONCLUSION AND POLICY RECOMMENDATIONS

The energy security of Turkey is very much interconnected with geopolitical developments due to its dependence on imported energy resources, especially on natural gas. The government has set targets until 2023 to reduce the risks to the functionality of the energy



system. However, the strong energy demand and significant growth rate of that demand have complicated efforts to realise those targets.

The natural gas market has structural challenges as has been mentioned, and yet the need for future investment and diversification of sources is clear. However, the investments are realised by BOTAŞ in the existing system and measures have to be taken by the government to encourage private companies to make investments in system upgrade and storage facilities. Therefore a new natural gas market law and reorganisation of the actors in the natural gas system will serve the energy security of Turkey. In relation to the new natural gas market law, the philosophy underlying the natural gas strategies has to be set out in a new “Natural Gas Strategy Paper” defining the ultimate targets for a better functioning natural gas system. Within this strategy, Turkey has to claim its international role as a natural gas hub and take steps to achieve it. As Turkey is a candidate for admission to the EU and has a growing natural gas market, Turkey has the commercial and political ability to introduce an Anatolian Gas Centre, which would provide an answer to the expectations of the producer and consumer countries’ trading and exchange regimes by acting as a ‘regional gas balancing point’.<sup>3 1</sup> With the realisation of the AGC concept, Turkey would gain a great advantage in satisfying its natural gas supply security and an ability to negotiate price reductions due to supply diversification in accordance with the energy security targets set by the government.<sup>3 2</sup>

On the other hand, Turkey has to make the best efforts to minimise the geopolitical risks affecting energy relations with other countries. The reorganisation of the natural gas market and its actors may give Turkish companies more independent space to establish private relations with the foreign companies that could help in reducing geopolitical risks for energy security. In other words, if Turkey could establish a semi-independent energy system and base its relations with foreign partners solely on mutual economic interests, the political risks would have less impact on energy relations.

Finally, Turkey should strengthen its efforts to achieve full membership of the EU. The energy security risks of Turkey and the EU overlap in many areas. The Southern Corridor concept will definitely serve the energy security of both Turkey and the EU but further steps should be taken to interconnect the Turkish gas market with that of the EU. The interconnection of the natural gas grids of Turkey and the EU would provide resilience to help overcome any future energy security threats and will be mutually functional and beneficial.



## Notes

<sup>1</sup> Yergin, Daniel. "Ensuring energy security." FOREIGN AFFAIRS-NEW YORK- 85.2 (2006): 70

<sup>2</sup> Ibid, p.71

<sup>3</sup> TMMOB Türkiye'nin Enerji Görünümü (Energy Outlook of Turkey) 3rd edition June 2014,

[http://www.mmo.org.tr/genel/bizden\\_detay.php?kod=34496&tipi=66&sube=0&cg\\_kod=281#.VpYiUvmLSUK](http://www.mmo.org.tr/genel/bizden_detay.php?kod=34496&tipi=66&sube=0&cg_kod=281#.VpYiUvmLSUK) (accessed 5 January 2016)

<sup>4</sup> BP Statistical Review of World Energy 2015,

<http://www.bp.com/en/global/corporate/energy-economics/statistical-review-of-world-energy.html> (accessed 5 January 2016)

<sup>5</sup> Presentation of the Budget of the Ministry of Energy and Natural Resources of Turkey by Minister H.E. Taner Yildiz to the Turkish Grand National Assembly, November 13, 2014

<sup>6</sup> MENR Energy and Natural Resources Outlook of Turkey, Vol.10, October 1, 2015

<sup>7</sup> Ibid.

<sup>8</sup> Ibid.

<sup>9</sup> Energy Market Regulatory Authority (EMRA), Natural Gas Sector Report, 2014

<sup>10</sup> BP

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